DOCUMENT RESUME

ED 396 236 CS 012 418

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TITLE	Effects of Even Start on Family Literacy: Local and National Comparisons. Report No. 35.
INSTITUTION	Center on Families, Communities, Schools, and Children's Learning.; Johns Hopkins Univ., Baltimore, Md.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	Mar 96
CONTRACT	R117Q00031
NOTE	43p.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Adult Basic Education; Comparative Analysis; Early Childhood Education; *Functional Literacy; *Instructional Effectiveness; *Literacy Education; Parent Child Relationship
IDENTIFIERS	Community Literacy; *Even Start; *Family Literacy; Maryland (Frederick County)

ABSTRACT

A study evaluated one local Even Start project, using the results of the final report of the "National Evaluation of the Even Start Family Literacy Program" for comparisons where possible. The clearest result of the national evaluation is that the amount or intensity of service is directly related to the strength of effects for both adults and children. Results for the Frederick County, Maryland's Even Start project show that 18 participants significantly improved their literacy skills, averaging a 6-point gain on the Comprehensive Adult Student Assessment System (CASAS) functional reading survey. Nine participants now are ready to take their General Education Degree (GED) exam or have received their GED. Program effects on children were not assessed due to a number of constraints, primarily the wide age range of children served and the inconsistent attendance of the children. However, children of parents in the Frederick County Even Start project are now much more likely to be exposed at home and in the community to literacy related activities, including visiting the library with their parent, checking out books, and spending more time in literacy-related parent-child activities. Findings suggest that the Frederick County Even Start project developed an effective collaborative network for both the provision of project services and as source of referral for other family needs. The project was able to reduce most of the common barriers cited by parents of preschool children to their participation in adult education. (Contains 46 references, 6 tables, and 2 figures of data.) (Author/RS)

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CENTER ON FAMILIES, COMMUNITIES, SCHOOLS & CHILDREN'S LEARNING

EFFECTS OF EVEN START ON FAMILY LITERACY

Local and National Comparisons

Lori Connors-Tadros

Report No. 35 / March 1996

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Published by the Center on Families, Communities, Schools and Children's Learning. This work has been supported by the Office of Educational Research and Improvement, U.S. Department of Education (R117Q00031). The opinions expressed are the author's and do not necessarily represent OERI positions or policies.

CENTER ON FAMILIES, COMMUNITIES, SCHOOLS & CHILDREN'S LEARNING

The nation's schools must do more to improve the education of all children, but schools cannot do this alone. More will be accomplished if families and communities work with children, with each other, and with schools to promote successful students.

The mission of this Center is to conduct research, evaluations, policy analyses, and dissemination to produce new and useful knowledge about how families, schools, and communities influence student motivation, learning, and development. A second important goal is to improve the connections between and among these major social institutions.

Two research programs guide the Center's work: the Program on the Early Years of Childhood, covering children aged 0-10 through the elementary grades; and the Program on the Years of Early and Late Adolescence, covering youngsters aged 11-19 through the middle and high school grades.

Research on family, school, and community connections must be conducted to understand more about all children and all families, not just those who are economically and educationally advantaged or already connected to school and community resources. The Center's projects pay particular attention to the diversity of family cultures and backgrounds and to the diversity in family, school, and community practices that support families in helping children succeed across the years of childhood and adolescence. Projects also examine policies at the federal, state, and local levels that produce effective partnerships.

A third program of Institutional Activities includes a wide range of dissemination projects to extend the Center's national leadership. The Center's work will yield new information, practices, and policies to promote partnerships among families, communities, and schools to benefit children's learning.

Abstract

This report describes the implementation and evaluation of one local Even Start project, using the results of the recently released final report of the *National Evaluation of the Even Start Family Literacy Program* for comparisons where possible. The National evaluation reveals that the Even Start program is providing previously unavailable services to the most needy families in many local communities. Effects of the Even Start program on specific child and family outcomes have, however, been mixed. The clearest result of the National evaluation is that the amount or intensity of service is directly related to the strength of effects for both adults and children. Adults and children with high levels of participation in Even Start's core services gained significantly more on the outcome measures than did adults and children with low levels of participation. Further, the extent to which parents took part in parenting education is significantly related to gains in children's vocabulary over and above gains in vocabulary that resulted from children's participation in early childhood programs.

This study of Frederick County, Maryland's Even Start project shows that 18 participants significantly improved their literacy skills, averaging a six point gain on the CASAS functional reading survey. Nine participants now are ready to take their GED exam or have received their GED. Program effects on children were not assessed due to a number of constraints, primarily the wide age range of children served and the inconsistent attendance of the children. Although we cannot draw empirical conclusions on the impact of the project on children's development or readiness for school, we can say that the children of parents in the Frederick County Even Start project are now much more likely to be exposed at home and in the community to literacy related activities. These include visiting the library with their parent, checking out books with their own library card, and spending more time in literacy related parent-child activities. Children may also be experiencing more appropriate discipline techniques and less harsh interactions with their parents. The Frederick County Even Start project carefully developed an effective collaborative network for both the provision of project services and as sources of referral for other family needs. The project was able to reduce most of the common barriers cited by parents of preschool children to their participation in adult education. Collaborative arrangements with Head Start, the Housing Authority, and local service providers, as well as services provided through the grant, effectively reduced these barriers for many participants.

Acknowledgments

The author wishes to thank the Frederick County Even Start program staff, particularly Richard Ramsburg, Brian Pritchard, and Lana Tinney, and participating families for their assistance and cooperation in conducting the evaluation.

Since teaching an adult to read was a new experience for me, I was not sure how to begin. It would not do, I felt, to down-grade the dignity of a human being like Fairlight Spencer by using the primer books for six- and seven-year-olds: "The rat ran from the cat." "Here the boy sat." Then too I believed that Fairlight would learn more readily than the children, and I wanted to give her even in this first lesson the concept of words as ideas. And since I knew from having seen some of her quilt patterns and flower arrangements that she was a creative person, surely she would learn fastest if I could find an imaginative way to teach her. My problem was how to achieve this.

I picked up the Bible. "There are lots and lots of words in this book."

"How soon will I be able to read it, Miz Christy?"

"In no time! And I'll tell you why. Every single word in this book and all the words together use only twenty-six English letters—these here. So after you've learned just twenty-six and know how to put the letters together to form different words, then you can read. Easy!

Her eyes shone. "I'd like that the best in the world." Already she was concentrating on that alphabet. After we had read it aloud twice, she became so intent on learning it that she almost forgot I was there. So I sat back watching her, feeling instinctively that I should let her set the pace, even do most of the talking—if she would. At last she sighed and looked at me. "Think I've got it...A-B-C-D—" on she went making only one mistake...

Teaching Fairlight was going to be pure delight. Up to this point in her life, she had been like some outcast child staring through the iron railings of the tall fence around the great estate of knowledge... She saw learning to read and write the English language as the key to unlock those gates.

[Excerpt from *Christy* by Catherine Marshall, 1967, pp. 172-173]

Introduction

Upon reading this excerpt an adult educator thinks, "How can I best reach my adult students?"; a teacher of disadvantaged children thinks, " How can I get my students' parents to be so motivated to improve themselves?"; and a family literacy staff person thinks, "This is what it all means — helping all families enter the *great estate of knowledge!*"

Christy, a teacher in Appalachia, decides to visit the homes of her students in her attempts to teach a diverse group of children with little previous education. She witnesses the pride of the families and their abject poverty — but gains insight into the cultural values and literacy practices of the families of the children she teaches. She struggles to find the best

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way to meet these children's needs, and in her search recognizes what we in the field of family literacy also have seen. We must reach out to families in their communities, and build bridges to the schools and other educational opportunities available to help families.

In the forward of a recent book on literacy, *Bridges to Literacy* (1994), Elizabeth Sulzby states, "The term *bridges* is significant. It points to the importance of exploring, asserting, and cultivating a positive set of relationships between home and school (in whatever form schooling takes)" (p. x). Family literacy programs work to create these positive relationships by recognizing that the adult literacy needs of parents are critically important for their own self-esteem and ability to support their families, that children are dependent on their families for support in meeting the expectations of schooling and society, and that communities need their citizens to be fully functioning and literate to contribute productively to the vitality of community life.

Consider other terms most often used to describe family literacy programs — connections, intergenerational, collaborations. These are also words that connote relationships and an understanding of the complexity of family life and development. It is important also to keep in mind the broad implications of the word *literacy*. What does it mean for an individual to be literate in 20th century society? Literacy is a means to communicate — within the family, school, community — and a method to achieve success in an increasingly complex and technological workplace. Many families are caught in a web of persistent poverty, unable to keep up with the rapid advances in society.

The Even Start Family Literacy Program

Authorized by Congress in 1988, the Even Start Family Literacy Program responded to the growing concern over the dismal performance of many poor children in school and a recognition of the importance of parental education and family support for children's school success. Implementation of local programs began in 1989. The Even Start program is intended to:

> ...improve the educational opportunities of the Nation's children and adults by integrating early childhood education and adult education for parents into a unified program... The program shall be implemented through cooperative projects that build on existing community re sources to create a new range of services. (P.L. 100-297, Sec. 1051).

The National Evaluation of Even Start collected data from programs from 1989 through 1992. Findings are based on data collected by all funded programs for a national data base, and supplemented by in-depth data, including pre-post, comparison/control group testing, collected in 10 sites (5 experimental, 5 control) chosen as in-depth study sites.

The Even Start program is intended to serve the most at-risk families, those with low literacy levels and living in high poverty areas. Of the 20,000 families served nationally from 1989-1992, 79% did not complete high school and 66% had incomes below $10,000 annually. Even Start projects are required to provide three core services to participating families: adult education, early childhood education, and parenting education. The average family participated in the program for seven months and received an average of 13.5 hours of adult education, 6.5 hours of parenting education, and 26 hours of early childhood education for their children each month. Many programs provide home-based services and other support services to facilitate participation in Even Start.

Most importantly, Even Start families received services that they may not have received if the program were not available. Of Even Start families, 91% participated in adult education versus an estimated 30-40% without the program, 95% participated in parenting education versus an estimated 8% without Even Start, and 98% participated in early childhood education versus an estimated 60% in the absence of Even Start.

The National Evaluation reveals that the Even Start program is providing previously unavailable services to the most needy families in many local communities. Effects of the Even Start program on specific child and family outcomes have, however, been mixed. There is some evidence that Even Start improves the chances that an adult without a high school diploma will achieve a GED at a greater rate than adults not participating in Even Start (22% of participants in the in-depth study achieved GED's versus 6% in the control group). Many adults also achieved significant gains on a measure of adult functional literacy in reading, although similar gains were seen in the control group. No measurable effects were found on parenting skills or on family resources, income, or employment.

Children in the Even Start program made gains on measures of school readiness at a faster rate than would be expected on the basis of normal development, and these gains were still evident one year after participation. However, once control group children entered preschool or kindergarten comparable gains to the Even Start group were seen. In other words, while Even Start children entered kindergarten at a higher level of readiness than

would be expected without program participation, children who had not participated made similar gains once they also entered a formal school program.

The clearest result of the National Evaluation is that *amount or intensity of service is directly related to the strength of effects for both adults and children*. Adults and children with high levels of participation in Even Start's core services gained significantly more on the outcome measures than did adults and children with low levels of participation. Further, the extent to which parents took part in parenting education is significantly related to gains in children's vocabulary over and above gains in vocabulary that resulted from children's participation in early childhood programs. Parents in low- to medium-intensity programs had children who scored at the 17-19th percentile on a standardized vocabulary test (PPVT) while families in high intensity programs had children who scored at the 26th percentile (St. Pierre, Swartz, Gamse, Murray, Deck, & Nickel, 1995).

The National Evaluation results are very important, as this four-year study represents the largest and most systematic attempt to describe family literacy programs and assess program impact with a reasonably large, national sample. Previous research in the field has focused on small, local or regional initiatives which provided important first-stage exploratory results but limited the generalizability of the findings. However, even within the National evaluation data set much variation in program design and population served exists because the Even Start legislation specifically calls for projects to build on existing community resources and to be responsive to local needs.

This report describes the implementation and evaluation of one local Even Start project, using the results of the recently released final report of the *National Evaluation of the Even Start Family Literacy Program* for comparisons where possible. Even Start has been described as a "family literacy laboratory" (St. Pierre et al., 1995, p. 5). This report should give the reader a brief view of one experiment in the laboratory compared to the "average" Even Start project.

Frederick County Even Start Project

The community. Frederick County is located one hour west of Baltimore, Maryland and one hour northwest of Washington, D.C. In the past it was best known as the dairy and farming center of Maryland but is now a rapidly growing community of mixed agricultural, industrial, and commuter sectors.

The county had a population of 115,000 in 1980, an estimated 1994 population of 170,000, and is projected to have 203,000 residents by the year 2000. This represents an increase of 77% in twenty years. Frederick City, with a 1994 population of 45,024, represents the single largest concentration of population in the county and is projected to grow to a population of 85,243 by the year 2000.

Of the total population, approximately 50-60% are between the ages of 25 to 60. Although the current dropout rate from Frederick County Public Schools is less than two percent, between 1950 and 1960 it ranged between 50-60% . Figures from the 1990 census show that seven percent of the 25 years and older population attained less than a ninth grade education and eleven percent left high school without a diploma. Unemployment peaked in 1991 at a rate of 9.5%, a figure based on those receiving unemployment benefits. If all non-working individuals were included the number would be significantly higher. Further, between 1989 and 1991 there was a 60% increase (629 vs. 1,012 families) in families receiving welfare.

Frederick County is the largest county in area in Maryland. Consequently, there are large distances between the City of Frederick and other towns and population centers. Lack of adequate public transportation creates significant access problems for families attempting to use services in the City of Frederick.

Social and economic trends suggest that low income families will continue to experience increasing levels of stress. However, Frederick County has a rich history of collaboration among service providers in order to meet the multiple and changing needs of families. For the past 26 years, the Adult Education Office of the public school system has successfully offered adult education, external degree programs, and other services to increase the literacy of adults in the community. In addition, in 1991 the Family Partnership opened in Frederick City in order to consolidate and coordinate a number of services designed to strengthen the parenting and literacy skills of adults and families. Upon this base of experience

and commitment, the Frederick County Public Schools Adult Education Office, in collaboration with Head Start, the Housing Authority, IBM, and other community agencies, was awarded an Even Start grant beginning in fiscal year 1993.

Program Description

The Frederick County Even Start Project is operated at two sites, the Family Partnership (a collaborative social service agency) and in the community room of a local housing project. Program services — adult education, early childhood education, and parenting are offered three days per week at the housing project site and three evenings per week at the Family Partnership site. The program is offered year-round, with a modified summer schedule. Transportation is provided to the evening location, participants walk to the housing project site.

The project is staffed by a part-time director, one full-time adult education instructor at each site, and two child development/family liaison staff at each site. Other staff and services are available to participants, depending on need. In 1994-1995, a home-based component, staffed by two home visitors, was implemented with all participants.

Participants are recruited through a variety of methods, including newspaper announcements, contact with local elementary school personnel, referrals from collaborative agencies, word-of mouth, and presentations to local community groups.

Core Components. At both sites adult education, ABE (adult basic education), GED (General Education Diploma) preparation, and ESL (English as a Second Language) instruction are offered, primarily through computer-assisted individualized instruction. Parenting education consists of weekly topic-oriented parenting groups, parent-child interaction activities (i.e., arts and crafts, reading), and individual or small group staff-parent consultations. Periodically, guest speakers present pertinent information to parents on topics such as nutrition, drug abuse, and other topics of interest to participants.

The early childhood component differs at each site due to the time of the day the programs are offered. At the Family Partnership site's evening classes, children range in age from infants to school-age children. At the day-time housing project site, children range in age from infants to preschool. Families eat their dinners together during the evening session

and have a snack together during the day time session. The curriculum includes creative expression (arts and crafts, music), reading, gross motor activities and outdoor play, games and homework help; however, the content of activities reflect the age and needs of children served at each site. At the Family Partnership site, older children are encouraged to use age-appropriate software programs in the computer lab.

Collaboration. Even Start projects are required to establish cooperative arrangements with other agencies in order to avoid duplication of services. In Frederick County, all three core components are implemented through grant funds; however, various resources and support services are provided by other agencies. For example, the housing project and Head Start donate in-kind space and transportation; and the Family Partnership donates in-kind the services of various support personnel (e.g., nurse, in-take counselor). Other collaborative partners include the job training agency, County Health Department, Preschool Inclusion Project, public school principal, and a special education administrator.

Periodic meetings of all collaborative partners are held and efforts to recruit new agencies to the collaborative partnership are on-going. In a survey of all collaborative agencies (n=13), satisfaction with the Frederick County Even Start program was high and most members reported that Even Start delivered an essential service to the community.

Costs of running the program. In 1994-1995 Frederick County received a grant of $75,000 from the state which was supplemented by $45,000 (in-kind dollars) from various county agencies. This resulted in an operating budget of $120,000 to run the program at two sites serving approximately 30 adults and 36 children. Table 1 compares the costs of the Frederick County Even Start project with the average cost nationally for Even Start projects operating in 1991-1992. The Frederick County grant award (not including in-kind dollars) was significantly less than the average grant award nationally; costs per family were very similar, although costs per participant were slightly higher in Frederick County.

INSERT TABLE 1 HERE

Methodology

Program Participants

The data for this study were collected for the 1994-1995 program year, the third year of program operation. We compare selected characteristics of participating families in the Frederick County Even Start program with data on similar family characteristics reported in the National Evaluation in order to give the reader a sense of how one local program fit with the national picture of Even Start programs.

Approximately 29 parents enrolled during the program year. However, for a variety of reasons, data are missing for a number of participants on selected items. This is a typical problem in Even Start evaluations. At the national level between one half and one third of the projects did not submit data to the national evaluation. In the tables below, n's for each item are reported for the Frederick County Even Start project. The National Even Start averages are based on reports from 270 of 340 projects with approximately 15,120 participants.

Table 2 describes the race, household composition, income level, source of income, employment status, primary language of the adult, and the number of children in the family for Frederick County Even Start participants in 1994-1995 and participants in all Even Start projects in 1992-1993, the most recent available data. Half of the participants in the Frederick County Even Start program were African American; about one quarter of the participants nationally were African American. Few (8%) Hispanic families were served in Frederick County (reflecting the population of the community); whereas 22% of the participants nationally were Hispanic. Frederick County served a somewhat more needy population than the average Even Start program — more single parent families, more poor families (income less than $10,000), more families receiving government assistance, and more families that were not employed. Most parents in the Frederick County Even Start program spoke English and they were less likely to have just one child than the average participant served nationally by Even Start.

INSERT TABLE 2 HERE

Children served. For the seventeen families with complete intake forms, the program served a total of 36 children; ranging in age from one to seven years old, with the average age of 3.5 years. Families also may have had older age-ineligible children.

Functional literacy levels of adults upon entry. Of the 15 adult participants in the Frederick County Even Start for which we have complete data on their reported highest level of education: 34% dropped out before high school (n=5); 40% dropped out during high school (n=6); and 27% completed high school (n=4). These statistics do not adequately reflect the real-life functioning skills of adults due to differences in educational system requirements, the effects of maturity and other experiences, and participation in educational opportunities beyond the mandated educational system. Indeed, five of the participants had previously participated in another adult education program before entering the Frederick County Even Start program.

Frederick County uses the Comprehensive Adult Student Assessment System (CASAS) to assess functional literacy levels in reading of participating adults. The CASAS (Rickard et al., 1990) is also used in the National Evaluation of Even Start Projects and other national evaluations of adult education programs. The CASAS reading survey tests a range of skills and their application in real life domains such as reading a public transportation schedule, items in the newspaper, and job applications. CASAS reading scores range from 150 to 260 and result in functional range scores: Beginning Literacy (below 200); Basic Literacy (200 -214); Intermediate Literacy (215-224); High School Literacy (225 and above).

The mean CASAS pretest score in Frederick County was 227 scale score points with a standard deviation of 7 points and a range of 214 to 238; the mean pretest score in the National Evaluation was 229 with a standard deviation of 15 points. Sixty-seven percent of the sample in Frederick County had some high school experience (although just 27% completed it), and 72% were functioning in the high school range according to the CASAS. Figure 1 reports the functional literacy levels of the Frederick County Even Start participants as measured by the CASAS, compared to the scores reported in the National Evaluation of Even Start projects for the 1992-1993 year. Frederick County served slightly higher functioning adults than did the average Even Start project.

INSERT FIGURE 1 HERE

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Parenting expectations and the home literacy environment upon entry. Previous research has shown a strong correlation between low parental education levels and less optimal conditions at home to support children's learning (Connors-Tadros, 1995; Hess & Holloway, 1979; Sticht & McDonald, 1990). While the processes underlying this correlation are not clearly known, one of the premises of the Even Start legislation is that raising adult education levels and providing parenting education will increase the support children receive from their parents for learning and school success. Most parents participate in the Even Start project in order to improve their ability to help their children (National Center for Family Literacy, 1993). Seventy-one percent (n=10) of the participants in Frederick County Even Start reported that helping their child was a primary reason for their participation.

In the evaluation of the Frederick County Even Start program we used the Parent Involvement in Education Scale (Dolan, 1983) to assess the home literacy environment and parental expectations of their children. The Parent Involvement in Education Scale (PIES), a paper and pencil self-report measure, has been used in other family literacy evaluations by the author and found to adequately tap the parenting and home environment areas targeted by this type of intervention. Parents (n=17) participating in the Frederick County Even Start generally had high expectations for their children's schooling upon entry into the program — 77% wanted their child to be in a college prep program in high school; 76% felt their child should attend four years of college or trade school or get some graduate school education; and 77% felt that education was extremely important or important for their child's success in life. Parents also reported that they conducted literacy related activities with their child — 46% often encouraged their child to read books or magazines not required for school, 65% of the children had a dictionary available at home, and 72% read to their child at least one time a week or more. Frederick County Even Start parents were also reasonably involved at their children's school — 70% had attended meetings with their child's teacher or other school staff at least two to three times a year and 92% had talked with their child's teacher at least one to two times per month.

Amount of Participation in Core Services

One of the most difficult challenges of delivering a family literacy intervention is sustaining the participation of families for a long enough time period for the program to have an effect. Although this was the third year of the project's implementation in Frederick County, no families had returned from the previous year. This is fairly typical of Even Start

projects nationally. Although attrition rates in family literacy programs are generally lower than in other adult education programs (National Center for Family Literacy, 1993), the National Evaluation found that most participants attend for seven or fewer months. Further, monthly participation is often not consecutive, so that a family could attend for one month, "stop" out (Connors, 1993; 1994) for another month or two, and then return to the program.

Eleven of the 29 participants left the Frederick County program before reaching a sufficient level of participation to be included in the analyses, resulting in a retention rate of 63%. This rate is similar to that reported in the National Evaluation, in which 69% of families participated for 12 or fewer months. Frederick County attempts to reduce many of the barriers typically faced by parents of young children to attending adult education programs. Transportation is provided to the evening site, and the day-time site is within walking distance of many targeted families; all services are offered at one site and any child requiring care is welcome; case management and associated support services are available to families in need; staff make a concerted effort to establish personal and supportive relationships with families (e.g., calling families to remind them to participate); and a home-based program is available for families who cannot (or prefer not to) leave their home for services. Reasons for leaving the program reported by project staff (in the cases where the reason is known) include: moved out of the service area, problems with housing, busy with other family responsibilities, and pregnancy.

Hours of adult education. Approximately 29 parents attended at least one session of the Frederick County Even Start project; however, just 18 adults participated long enough and consistently enough to be pre- and post-tested in reading skills. The developers of the CASAS (the measure used in this study of functional literacy), suggest that gains will not be seen until participants have been enrolled in adult education classes for at least 70-100 hours (St. Pierre et al., 1995). Figure 2 reports the hours of participation in adult education by high, medium, and low levels for Frederick County Even Start participants (n=21). Thirty-three percent (n=7) of the sample participated in adult education for less than 72 hours and thus would not be expected to make gains on the CASAS; 29% (n=6) of the sample participated for 74-100 hours and thus would be expected to achieve minimal gains on the CASAS; and 38% (n=8) of the sample participated for 102 to 210 hours and thus would be expected to achieve at least a four- to five-point gain (according to the developers this is a moderate gain).

INSERT FIGURE 2 HERE

Hours of parenting education. The number of hours of parenting education that each participant received is difficult to calculate because parenting "education" occurred in multiple forms, ranging from structured parenting workshops or presentations to informal consultations or.one-to-one personal or phone interactions between staff and parent. Parent-child together activities typically occurred at each session but some were more formally structured than others (i.e., an arts and crafts activity versus a shared meal time). Parenting education hours have been estimated as one hour per session (out of three hours) of attendance in the program, which includes formal parenting activities, informal parent-staff interactions, and parent-child activities. Home visits are not included in this estimate and will be reported separately.

For the study sample, participation in parenting education ranged from 24 to 105 hours, with a mean of 47 hours and a standard deviation of 18 hours. Fifty-seven percent (n= 12) participated for 49 or fewer hours, 38% (n=8) participated for 50 to 100 hours, and 5% (n=1) participated for 105 hours.

Hours of early childhood education. The Frederick County Even Start Project allowed parents in adult education to take any of their children to the child development program in order to facilitate parents' participation. However, early childhood services were targeted to age-eligible children (1-7 year olds). The child development program was offered for approximately three hours per session (which could include parent-child time). Unfortunately, adequate attendance records were not kept on which child or children from a particular family attended each session. Therefore it could not be determined how many hours of early childhood education each child received. For analyses we estimated the hours of early childhood services based on the attendance of the parent. Parents always took one or more children to the child development program each time they attended a session. Estimated early childhood participation ranged from 72 hours to 315 hours, with 24% (n=5) participating for 50-100 hours, 38% (n=8) participating for 101-150 hours, 29% (n=6) participating for 151-200 hours, and 7% (n=2) participating for 201-315 hours.

Home-based services. In January 1995, Frederick County revised the home-based component of the program at the request of the State Coordinator for Even Start. Previously, fewer than 50 hours of service (in total) had been delivered to families at home, primarily to encourage the parent to remain in the program. As of 1995, each family was scheduled to receive two 30-50 minute home visits per month, primarily focusing on parenting and family-oriented issues. Twelve families received home visits during the period of January through

August, 1995, ranging from two visits to 30 visits per family, with a mean of eight visits per family.

Comparison to the average Even Start project. Table 3 reports the percentage of participation by core service for Frederick County and the National Even Start Evaluation. Frederick County was much more successful than the average Even Start project at sustaining participation in adult education beyond 49 hours; 90% of the participants in Frederick County received 50-149 hours of adult education. On the other hand, some Even Start projects (10%) in the National evaluation were able to maintain participation in adult education for 300 hours or more, greatly increasing the likelihood of significant gains on the CASAS and/or achievement of a GED by the participant. Frederick County provided about the same number of hours (100 hours or less) of parenting education as did the average Even Start project (95% vs. 85%). Similarly, Frederick County was more effective than the average program in providing moderate amounts (50-100 hours) of early childhood education and less effective in providing very intensive (300-600 hours) early childhood programs to children.

INSERT TABLE 3 HERE

Program Effects

Parent Literacy

In Frederick County, the CASAS reading test of functional literacy was administered after each 50-hour increment of participation in adult education in order to capture growth relative to length of program participation and to reduce the amount of missing data which often occurs if post-testing is done only at the end of the program year.

Table 4 indicates average pre-test, post-test and gain scores for the total Frederick County sample (n=18) as compared to the results of the in-depth study of the National Evaluation of Even Start projects (Even Start, n=64; control group, n=53). The mean on the pre-test of the CASAS was about the same for Frederick County, in-depth study Even Start sites, and the control group. However, the mean gain scores in Frederick County were

significantly higher (6 points, p=<.001) than either the control group or the in-depth study sites (3.6 and 3.7 points respectively, p=<.05). Thus, the Frederick County Even Start program was more successful in achieving gains on the CASAS than the 10 projects (5 experimental and 5 control) studied in the in-depth study sample of the National evaluation.

INSERT TABLE 4 HERE

Two primary factors are hypothesized to influence the amount of gain on the CASAS or other measures of adult literacy: amount of instructional time and beginning functioning level (St. Pierre et al., 1995). The developers of the CASAS suggest that educationally significant gains would not be expected with less than 70-100 hours of adult education participation and adults with lower entry level scores on the CASAS would be expected to make greater gains (St. Pierre et al., 1995). Most participants in Frederick County made gains on the post-test and four participants improved one full functional level. One participant went from the basic literacy level to the intermediate level and three participants went from the intermediate level to the high school level on the CASAS.

Table 5 reports the pre-test, post-test, and gain scores for the Frederick County Even Start sample by hours of adult education participation and by beginning functional literacy levels. Significantly greater gains were achieved by the adults who participated in the most hours of adult education (100-210 hrs), followed by the group of adults who participated for 70 to 100 hours in adult education. Although the adults who participated for 50-70 hours in adult education made some gains, they were not statistically significant. These results support the relationship between hours of participation and amount of gain.

The analyses conducted to determine differences in gain scores as a function of beginning literacy level are interesting but should be interpreted with caution because of the small and uneven sample sizes. However, the basic pattern of higher gains associated with lower beginning functional levels is seen in this data. The Frederick County sample included just one adult that began the program at the basic literacy level, scoring on the pre-test in the 200-214 range. This individual gained 3 points on the post-test. (It should be noted that it is highly likely that those participants that dropped out before completing 50 hours or the first post-test were functioning at this basic literacy level.) The greatest gains (eight points) were achieved by the intermediate level group (scoring between 215-224 on the pre-test), followed

by a gain of more than five points for the high school level group (scoring 225 or more on the pre-test).

INSERT TABLE 5 HERE

Graduate Equivalency Diploma (GED) attainment or preparation. Most participants entering Even Start projects hope to get their GED. The National Evaluation reports that "Even Start has had a statistically significant, positive effect on GED attainment" (St. Pierre et al., 1995, p. 193). In the Frederick County Even Start project, nine (of 18) or 50% of the sample were preparing to take or had received their GED at the end of the program year. This is an important accomplishment for the adults and one that most likely will result in their participation in further adult education (Connors-Tadros, 1995).

Changes in the Home Environment

As adults further their education, it is theorized that their children will be affected by the associated changes in parental attitude and parenting skills at home (Connors, 1994). We used two measures to determine changes in the home environment. The Parent Involvement in Education scale (Dolan, 1983) is a self-report measure assessing aspects of the home environment. A total score and four factor scores are determined. The Parental Belief Survey (Segal, 1985) assesses parent's beliefs about their role in their children's development. A total score and two factor scores are determined.

Table 6 describes the effects on the home learning environment derived from the total scores and factor scores on the Parent Involvement in Education (PIE) scale and the Parental Belief survey (PBS). On the PIE, mean scores improved on three factors (parental involvement in school, home environment, and literacy-related activities), and decreased on one factor (parental expectations). The total score improved from pre-to-post testing. The increase on the literacy related parent-child activities factor was significant; none of the other increases or decreases were significant. On the PBS, the teacher factor score improved slightly and the discipline and total scores decreased from pre-to-post testing. None of the increases or decreases were significant.

INSERT TABLE 6 HERE

Comparison of pre-post test means were also conducted for individual items on both measures. Two items on the PIE showed significant, positive gains: more children had their own library cards ($p=<.05$) and parents reported that they took their child to the library more often ($p=<.01$). On the Belief survey, four individual items showed significant, positive gains (all at $p=<.05$). These items were:

- The most important thing to teach children is absolute obedience to parents (reverse scored).
- A four-year-old should dress himself completely, except for tying his shoes.
- Children should not question the authority of their parents (reverse scored).
- A teacher should not be allowed to use physical punishment with a child.

The National Evaluation of Even Start used different measures from the ones used here to assess effects on parenting skills and the home learning environment. Therefore, we cannot directly compare the effects found in the Frederick County project with the national averages. However, findings for the in-depth study component of the National Evaluation show no statistically significant program effects on a range of home environment variables. Only small to moderate gains were statistically significant for the full national sample.

The impact of home-visits on family functioning. The home visit component primarily focused on parenting and overall family functioning. This component specifically aimed to improve the participant's levels of empowerment (e.g., ability to act independently, secure needed resources, and effectively problem-solve). Staff assessed family functioning, accomplishments, and renewed family goals after five home visits to the family with a form developed for this program. Four families had one "five-visit review assessment," one family had two, and one family had three assessments. The staff assessed families' level of empowerment on a 10-point scale, ranging from 1 ("much nurturing needed") to 10 ("functioning well"). At the first five-visit review (n=6) all families were rated a 5 or less on their "level of empowerment." For the two families who had more than one five-visit review, one parent moved from a "2" to a "4" on the second assessment and the other parent moved from a "4" to a "9" on the third assessment.

Staff assessments of parenting included: very little interaction with children, no regular bed-time, routine is disruptive, and harsh tones with children. Home visitors used such strategies as practicing discipline techniques, modeling parent-child activities, and referring the parent to other social support services available to the family.

Participant perceptions of the impact of the program. It is often difficult to capture the nuances of changes in families' lives as a result of participation in relatively short-term interventions (Connors, 1994; St. Pierre et al., 1995). Many participants in Even Start programs have had negative educational experiences; therefore the first step in the process of change is helping families feel comfortable and confident in their choice to enroll in the project and pursue goals for themselves and their children (National Center for Family Literacy, 1995). Individual interviews with adult participants (n=11) were conducted to assess qualitative changes in attitude towards educational experiences and to hear from parents directly how their participation had impacted their lives.

All of the Frederick County parents interviewed were very positive about the program, both for themselves and their children. Most parents identified one staff person as the "key" to helping them feel comfortable with this new experience and to giving them continuous encouragement to persist in the program. One parent said, " The teacher explained what goes on and gave me help when I needed it. This is not like school. They never helped me when I needed help."

Many participants particularly liked the individualized computer-based instruction, finding the computers exciting because they had never used them before and believing that computer experience would help them in future job searches. Other participants mentioned that they liked that their children were cared for while they were in class, they liked the location, and they liked that the staff would listen to their problems and offer help if possible. Parents reported that their children thought it was fun to come to "school" and liked the arts and crafts activities and toys to play with.

All parents thought the program had helped them in many areas. Examples of what parents said when they were asked, "Do you do anything different now than before you started the program?" were:

Personal behavior — "Don't drink as much." "I feel better about myself because I am doing something good for myself and my kids."

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Parenting — "I have more patience with my kids." "I learned how to use time-outs and other discipline techniques." "I don't yell at my kids so much."

Activities with children — "I learned how to play new games because now I can read the directions." "I picked up a couple of tips on activities to do with my kids." "I read more books to my son."

Parent literacy — "I learned a lot of English and how to read." "I read more books for me." "I am more sure of myself in math."

The interviews with parents reveal that the Frederick County Even Start program is resulting in small changes in the quality of families' lives. The National Evaluation reports that in focus group interviews with parents as part of the in-depth study, participants described similar short-term positive impacts of the program (St. Pierre et al., 1995).

Discussion

The Frederick County Even Start project has significantly improved the literacy levels of 18 participants, averaging a six-point gain on the CASAS functional reading survey. Nine participants now are ready to take their GED exam or have received their GED. While the numbers are small, these are important accomplishments. Connors-Tadros (1995) found that for parents of preschool children, achieving a high school diploma is a "critical marker" for participation in further adult education. A pattern of successful pursuit may be established once the first degree or diploma is earned. Once the pattern is begun, and the habits and skills necessary for the role of a student are integrated with other adult roles such as parent or spouse (Pallas, 1993), it is much more likely that an individual will continue to pursue further education or training (Connors-Tadros, 1995).

Program effects on children were not assessed due to a number of constraints, primarily the wide age-range of children served and the inconsistent attendance of a stable group of children. This is a major limitation of the evaluation of the program, and therefore we cannot draw conclusions about the impact of the project on children's development or readiness for school.

However, we can say that the children of parents in the Frederick County Even Start project are now much more likely to be exposed at home and in the community to literacy related activities — visiting the library with their parent, checking out books with their own library card, and spending more time in literacy related parent-child activities. Children may also be experiencing more appropriate discipline techniques and less harsh interactions with their parents. These findings — of modest changes in the home environment — support the results found in previous studies of local family literacy projects (Connors, 1993; 1994; Dolan, 1992).

The small to modest changes in the home environment found in both the National Evaluation and in Frederick County may be disappointing to some who expect the integrated, holistic focus of Even Start to have an immediate and dramatic impact on the family (Connors, 1994). Many explanations are possible for the modest results. The measures may not be sensitive enough to identify the short-term processes of family change, or the quality and intensity of the parenting education component may be weak (Connors, 1993; 1994; St. Pierre et al., 1995). Also, parents tend to rate themselves rather high on pre-test self-report measures of the home environment, leaving little room for growth (Dolan, 1992; St. Pierre et al., 1995).

Although even small, positive gains are important, it is clear that the life circumstances of children and parents will not significantly and importantly change unless parents and children obtain a sufficient amount of service in each of the three core components (adult education, early childhood education, parenting). Three findings from the evaluation of the Frederick County program illustrate how limited funds can be used most effectively to deliver services to the community.

- The Frederick County Even Start program was able to deliver a moderate amount of service to families, and this resulted in moderate gains for adults. It appears that the level of service delivered in the Frederick County Even Start project "matched" the level of need presented by most of the families served.

- The Frederick County Even Start project carefully developed an effective collaborative network to provide project services and meet other special needs of families.

- The Frederick County project was able to reduce most of the common barriers cited by parents of preschool children to their participation in adult education.

In Frederick County, collaborative arrangements with Head Start, the Housing Authority, and local service providers, as well as services provided through the grant, effectively reduced these barriers for many participants. Connors (1993) suggested that programs are most effective when they consider the needs of clients recruited to the program relative to the amount of services the program is able to provide. Connors-Tadros (1995) reported that "the top five barriers for both minority and white respondents in a national survey of adult education participation were: conflicts with family responsibilities, lack of child care, conflict with work schedule, meeting time of classes, and cost " (p. 9).

Minority parents more often cite transportation and location as significant barriers. Frederick County offered transportation to the more isolated Family Partnership site and conveniently located the second site in the housing project serving many minority parents who might be well served by the project.

Cooperative agreements with other local service providers are mandated in the Even Start legislation. However, the ease with which collaborations are forged and the level of integration of services often depends on the community's history and willingness to participate in the collaborative venture (Connors, 1994). In Frederick County, a foundation of collaboration was established with the Family Partnership. Further, as the visibility of the Even Start project grew, and its success became more widely known, the underpinnings of the Even Start model (e.g., a family-focused program that integrates adult and early childhood education) began to permeate other programs and services in Frederick County. In 1995, the County was awarded a multi-million dollar grant from a national foundation to further streamline and coordinate the county's services to children and families.

Conclusions

The local evaluation of the Frederick County Even Start project provides a context for the findings of the National Evaluation of Even Start Projects. St. Pierre and colleagues (1995) state: "Even Start is not large enough to make an impact on its entire target population. However, it has had a broad impact on individual families and many local service communities" (p. 254). These statements apply to the impact of the Frederick County project on its participants. A small number of families have made important gains because of the increased availability of literacy-related services for families in need in Frederick County.

The Even Start legislation and grant program was designed to test a new model of service delivery, integrating single-service intervention programs of adult education, preschool education, and parenting education into a more holistic model of intervention and prevention. The mandates for service delivery required a fundamental shift from a focus on individuals to a focus on the family (Connors 1993; 1994). One of the basic research questions of the National Evaluation is: Does the Even Start model work? Findings from the National Evaluation and the Frederick County local evaluation suggest that it does work — at least moderately well. While the model takes years to fully implement, most projects, including the one in Frederick County, offer all three component services, many support services, and some home-based services, and develop collaborative arrangements with other local service providers. Participation in adult education results in the attainment of a GED for many participants; more hours of participation results in greater gains on literacy measures for adults and greater gains on tests of vocabulary development for children.

Reflecting on the last two decades of research in the area of family literacy, we can conclude that (1) families are important centers of literacy development for children (Auerbach, 1989; 1995; Chall & Snow, 1982; Delgado-Gaitan, 1987; Taylor & Dorsey-Gaines, 1988), (2) the literacy needs and skills of children are interwoven with the literacy needs and skills of their parents (Darling & Hayes, 1989; Duffy, 1992; Hess & Holloway, 1979; Sticht, 1975; 1992), and (3) family literacy programs which respond to community needs and participant interests are effective in many ways in improving the abilities of parents to pursue further job and educational opportunities and to provide their children with more school readiness and literacy-related activities (Connors, 1993; 1994; Dolan, 1992; Edwards, 1995; Parratore, 1995; St. Pierre et al., 1995).

However, further questions remain. The most critical question from the National Evaluation of Even Start programs is — What is the *long-term* impact of the Even Start program on children and families once they exit the program? Is the momentum from the gains made in the Even Start program sustained once children enter school and parents enter the work force or other educational activities? Are parents able to continue to support their children's literacy development without further intervention? How can public schools and other community service agencies support families in continuing to reach the goals they set for themselves and had begun to achieve in the Even Start program?

Intensity and duration are important factors in realizing long-term results of family literacy interventions. Longitudinal studies of children who participated in preschool

intervention programs show that cognitive gains are maintained in the early years of schooling but often fade out after the third grade, although positive effects of the program in other areas (e.g., fewer retentions and special education placements) are seen many years after the intervention ends (Consortium for Longitudinal Studies, 1978; 1985; McKey et al., 1985). Of particular importance are the results from the longitudinal study of children participating in the Carolina Abecedarian Project. Children who received preschool *and* school-age (kindergarten through grade 2) intervention, as compared to children receiving preschool only, primary only, and no intervention, showed increased performance on cognitive and academic achievement measures through age 12 as a function of the duration and intensity of the intervention (Campbell & Ramey, 1994; Morisset, 1993; Wasik & Karweit, 1994; Young & Marx, 1992).

The long-term impact of adult education and job training on adults has generally been found to be weak (Connors, 1994; Datta, 1992; Mikulecky, 1992); although the research in this area has been hampered by the fact that most federally-funded employment training assistance programs do not collect adequate data on participant outcomes (General Accounting Office, 1994). Research examining the long-term effects of parenting programs on children is more promising; many studies have found that participation in home-visiting or other high intensity parent education programs do positively impact parents' attitudes and behavior and children's health and development (Gomby et al., 1993; Minow, 1994; Seitz & Apfel, 1994). The National Even Start Evaluation results support the positive impact on children of parents' participation in parenting education. Children who scored high on a test of vocabulary development had parents who had participated in high levels of parenting education.

Other critical questions relate to the quality of both the Even Start programs and the subsequent schools and adult education or job training programs that the participants attend. The National Evaluation of Even Start programs did not examine program quality directly but the results did identify some "best practices" and other innovative instructional strategies of Even Start projects. For example, *provision of home-based services* was found to increase program retention rates, and programs providing more amounts of service hours in each component were more effective in achieving significant gains in core areas. *Using computers* in the adult education classroom to increase parents' word processing proficiency and as a strategy to encourage parent-child interaction, particularly with older children, is very appealing to parents (Connors, 1994; St. Pierre et al., 1995).

The National Evaluation found great variability in how programs provided services, in the content and methods of instruction, and in how program components were integrated. In Frederick County, providing a literacy intensive curriculum to the wide age range of children served proved very difficult. This problem was also experienced by other Even Start programs nationally (St. Pierre et al., 1995). There are no standard curricula mandated in the Even Start grant guidelines in order to encourage programs to be responsive to community needs and participant interests. While responsiveness is very important, particularly with regards to retention, programs also hope to make significant progress in improving specific literacy skill areas. Research in the last decade has made significant advances in understanding, for example, how very young children learn to read and write (i.e., emergent literacy). Program staff may not have access to this information in readily usable forms in order to guide their instruction of children in the preschool classes, to develop appropriate parenting education activities, or to integrate specific skills into adult education instruction (U. S. Department of Education, 1996).

Much work remains to be done in the areas of curriculum and staff development in order to provide developmentally appropriate instruction to the different age and skill levels served and to ensure that the content of instruction is learner-centered and skill-rich (Connors, 1994; Gadsden, 1996). Family literacy programs, in general, have not focused the necessary attention on designing appropriate curriculum and instructional strategies for the complex set of goals and clients present in these types of programs (Gadsden, 1996). The work of Kagan and colleagues (Kagan et al., 1992; 1993) in redesigning and integrating child care training, parenting, and job readiness curricula is instructive to the field of family literacy. After a review of the available curricula, relevant research, and field-based lessons, the *Family Education and Training* project implemented the new program-specific curricula with low-income women training for jobs in the child care field. Early results suggest that participants have been successful in obtaining child care credentials or pursuing further education in the field, and in obtaining jobs in child care.

No studies to date have looked at the quality of programs that Even Start participants subsequently attend. This is an area of great concern given that the Even Start population serves poor families who often reside in communities with limited resources. Schools and other community agencies may not be of the highest quality. Lee and Loeb (1995) found that former Head Start students were much more likely to be attending middle-grade schools of lower quality than students who had not attended preschool or had attended other preschools, after controlling for minority status, poverty, and parental education. The authors state, "No

matter how strong the early boost received by these children from their Head Start experience, the fact that their subsequent education is in lower quality schools (and that learning is likely to be inferior in those schools) would seem to undermine any early advantage" (p. 74). Researchers, policy makers, and others concerned with Even Start need to carefully consider this warning in the design of follow-up studies and in planning transition policies.

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TABLE 1

FEDERAL COSTS FOR EVEN START PROJECTS:
FREDERICK COUNTY AND NATIONAL AVERAGES

	FREDERICK COUNTY	NATIONAL AVERAGE
GRANT AWARD	$75,000	$196,748
FAMILIES SERVED	30	79
PARTICIPANTS (parents and children) SERVED	66	202
COST PER FAMILY	$2500.	$2503.
COST PER PARTICIPANT	$1136.	$975.

Source of National statistics: St. Pierre et al., 1995

TABLE 2

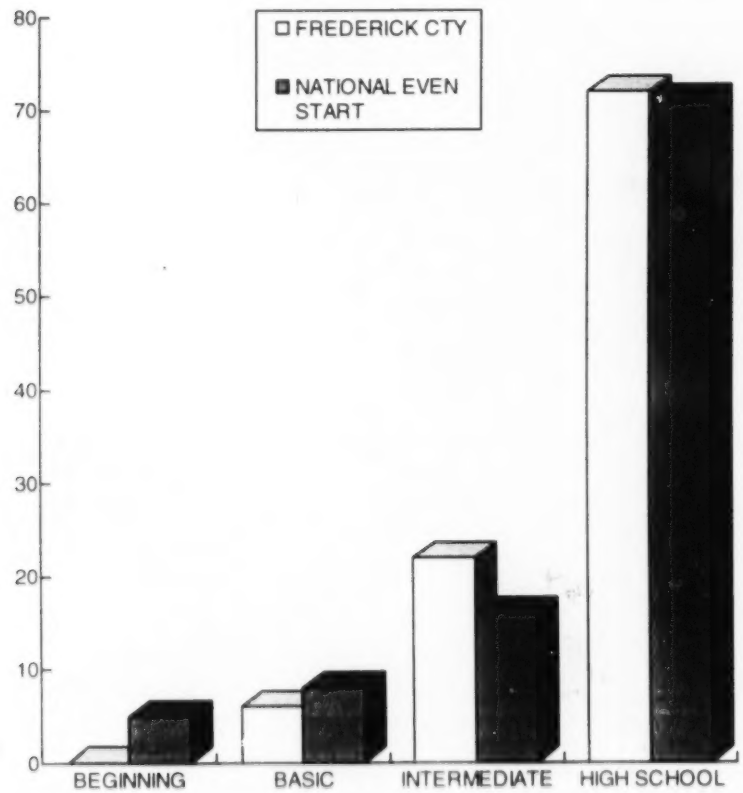
CHARACTERISTICS OF FREDERICK COUNTY EVEN START PARTICIPANTS AND NATIONAL EVEN START PARTICIPANTS

	FREDERICK COUNTY 1994-1995	NATIONAL EVEN START 1992-1993
Race	(n=12)	
White	42%	40%
African American	50%	26%
Hispanic	8%	22%
Other	0%	12%
Household Composition	(n=15)	
Couple	20%	50%
Single	73%	38%
Extended family	7%	12%
Income	(n=14)	
Under $10,000	79%	66%
Source of Income	(n=14)	
Job wages	21%	46%
Government Asst.	72%	50%
Child Support	7%	2%
Employment	(n=12)	
Yes	8%	24%
No	92%	76%
Primary Language	(n=12)	
English	84%	66%
Spanish	8%	26%
Other	8%	8%
Number of Children	(n=18)	
1 child	11%	21%
2 children	28%	33%
3 children	33%	24%
4 or more children	28%	22%

Source of National statistics: St. Pierre et al., 1995; Based on reports from 270 of 340 projects.

FIGURE 1

PERCENT OF ADULTS AT EACH CASAS LEVEL UPON ENTRY: FREDERICK COUNTY AND NATIONAL EVEN START



Frederick County n=18
Source of National statistics: St. Pierre et al., Based on reports from 120 of 340 projects.

FIGURE 2

HOURS OF HIGH, MEDIUM, AND LOW LEVELS OF PARTICIPATION IN ADULT EDUCATION IN FREDERICK COUNTY EVEN START PROGRAM

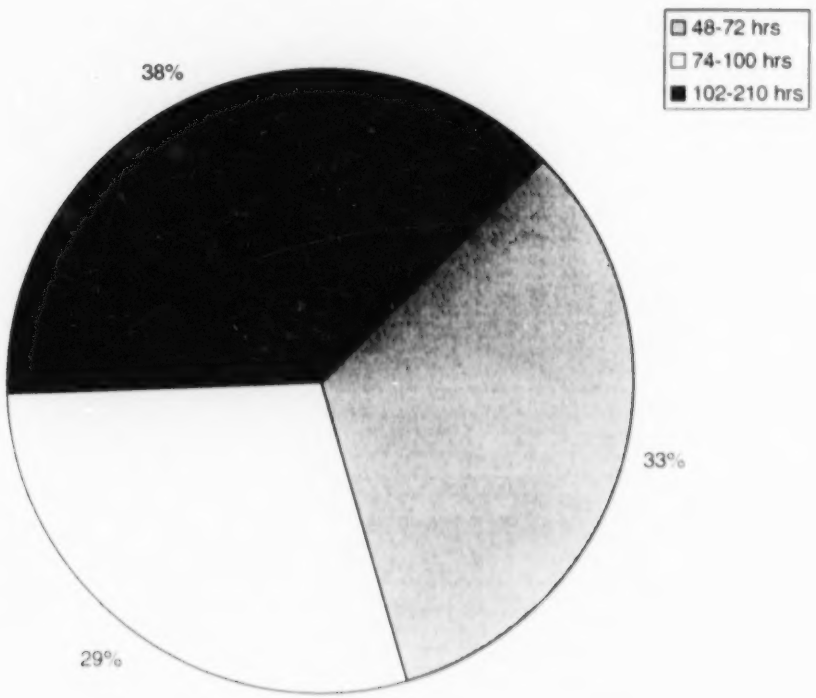


TABLE 3

PERCENT OF PARENTS PARTICIPATING IN EACH CORE SERVICE: FREDERICK COUNTY AND NATIONAL EVEN START PROGRAMS

	FREDERICK COUNTY	NATIONAL EVEN START
ADULT EDUCATION		
0-49 HRS	5%	55%
50-99 HRS	52%	15%
100-149 HRS	38%	8%
150-199 HRS	0%	5%
200-249 HRS	5%	4%
250+	0%	3%
300+	0%	10%
PARENTING ED		
0-49 HRS	57%	66%
50-99 HRS	38%	19%
100-149 HRS	5%	6%
150-199 HRS	0%	4%
200-249 HRS	0%	2%
250+	0%	3%
EARLY CHILDHOOD EDUCATION		
0+	0%	38%
50+	29%	11%
100+	33%	6%
150+	28%	6%
200+	5%	5%
250+	5%	5%
300-600+	0%	29%

Source of National statistics: St. Pierre et al., 1995

TABLE 4

CASAS READING SURVEY:
FREDERICK COUNTY AND THE IN-DEPTH STUDY
OF THE NATIONAL EVALUATION

	FREDERICK COUNTY (n=18) MEAN (SD)	**NATIONAL EVEN START (experimental, n=64)** MEAN (SD)	**NATIONAL EVEN START (control, n=53)** MEAN (SD)
CASAS pre-test	227.0 (7.1)	229.4 (13.7)	226.8 (16.9)
CASAS post-test	233.0 (6.6)	233.1 (13.0)	230.4 (14.1)
GAIN	6.0**	3.7*	3.6*

* p=<.05, ** p=<.000
Source of National statisitics: St. Pierre et al., 1995

TABLE 5

**SCORES ON THE CASAS FOR FREDERICK COUNTY:
BY HOURS OF INSTRUCTION AND
BEGINNING LITERACY LEVELS OF ADULTS**

	PRE-TEST	POST-TEST	GAIN
ATTENDANCE	**MEAN (S.D.)**	**MEAN (S.D.)**	**MEAN (S.D.)**
50-72 hours (n=5)	225.2 (8.2)	229.6 (8.8)	4.4 (4.2)
73-100 hours (n=6)	229.5 (7.0)	233.5 (4.6)	4.0 (3.2) *
101-210 hours (n=7)	226.3 (7.0)	235.1 (6.3)	8.6 (4.6) **

BEGINNING LITERACY	**MEAN (S.D.)**	**MEAN (S.D.)**	**MEAN (S.D.)**
Basic (n=1)	214.0	217.0	3.0
Intermediate (n=4)	219.0 (2.8)	227 (5.8)	8.0 (4.1)*
High School (n=13)	230.5 (4.7)	236.2 (3.2)	5.6 (4.7)**

* p=<.05 ** p<=.001

TABLE 6

EFFECTS ON THE HOME LEARNING ENVIRONMENT: PARENT INVOLVEMENT IN EDUCATION AND PARENTAL BELIEF SURVEYS

Parent Involvement in Education (PIE) (n=13)	PRE-TEST MEAN (S.D.)	POST-TEST MEAN (S.D.)	GAIN MEAN (S.D.)
Parent Involvement (e.g., How often talk to child's teacher about school progress)	29.7 (5.3)	32.6 (8.7)	2.4 (8.4)
Home Environment (e.g., Does child have a space to do homework that is quiet and well-lit)	34.4 (5.4)	37.0 (6.2)	2.3 (8.8)
Literacy Activities (e.g., How often go to the library with child)	23.1 (5.0)	27.1 (6.1)	3.7 (5.7) *
Parent's Expectations (e.g., type of high school program would like child to attend)	27.7 (4.6)	25.8 (6.3)	-1.8 (6.9)
TOTAL SCORE	115.6 (13.3)	122.8 (24.9)	5.8 (24.3)

Parental Belief Survey (PBS) (n=16)	PRE-TEST MEAN (S.D.)	POST-TEST MEAN (S.D.)	GAIN MEAN (S.D.)
Disciplinarian	41.2 (4.2)	39.4 (4.4)	-2.0 (4.1)
Teacher	26.2 (2.3)	26.4 (1.7)	.18 (2.1)
TOTAL SCORE	67.4 (4.9)	65.8 (4.8)	-1.8 (4.2)

*p=< .05

PIE (Range of possible total scores is 36 to 200; Parent Involvement: 9 to 44; Home Environment: 10 to 55; Literacy-Related Activities: 7 to 35; Parent's Expectations: 7 to 35)

PBS (Range of possible total scores is 24 to 96; Disciplinarian factor-15 to 60; Teacher factor-9 to 36.)